

## UNITED KINGDOM

### MANAGING THE NUCLEAR LEGACY IN THE UK – PROGRESS TOWARDS THE ESTABLISHMENT OF THE NUCLEAR DECOMMISSIONING AUTHORITY

**Robin M. Sellers**

Department of Trade & Industry London

#### **Background**

In November 2001, the British Government announced its intention to undertake a radical change in the arrangements for managing public sector civil nuclear liabilities in the UK. The UK Government's proposals for this transformation were published in a White Paper *Managing the Nuclear Legacy – A Strategy for Actions* published on 4 July 2002. This envisages the establishment of a new organisation, the Nuclear Decommissioning Authority (NDA), responsible to Government and with a remit to ensure that the UK's nuclear legacy is cleaned up safely, securely, cost effectively and in ways which protect the environment.

The NDA will be responsible for some twenty UK nuclear sites comprising about 85% of the UK's civil nuclear liabilities. These sites are those currently operated by the United Kingdom Atomic Energy Authority (UKAEA) and British Nuclear Fuels plc (BNFL), and amongst other things include many facilities from the early years of nuclear power *etc* in the UK, liabilities associated with the Joint European Torus (JET) fusion research project at UKAEA's Culham site, the Magnox nuclear power stations, and the associated facilities at Sellafield for reprocessing. The challenge is to decommission and demolish these facilities, package the radioactive wastes ready for disposal and remediate the sites, taking into account the uncertainties associated with many of the older facilities and the potential technical novelty of the processes that will have to be deployed to achieve this.

#### **The Liabilities Management Unit and its remit**

To prepare the way for the NDA, a special team has been established within the UK Department of Trade & Industry. This team, known as the Liabilities Management Unit (LMU), includes staff from both private and public sectors, and is supported by a partner contractor (Bechtel Management Company Ltd) who bring high quality, experienced project management skills to the team. The following sections describe the LMU's principal tasks.

#### **Acquiring a detailed knowledge of BNFL and UKAEA liabilities**

Acquiring a detailed knowledge of BNFL and UKAEA liabilities has been an early priority for the LMU, since it provides the foundation for all the NDA's activities. In particular it will be used to build the first National Lifecycle Baseline, the overall plan for discharging the UK's public sector civil nuclear liabilities. This Baseline will, in time, provide the basis for planning short term work

programmes at each site and thereby provide the NDA with the means to drive forward and focus available resources on priority tasks.

The baselining process consists of the following basic stages:

- 1) Site assessments: Each site is being subject to an assessment, carried out with the assistance of the existing site management to:
  - Understand the nature of the liabilities on the sites.
  - Learn about the existing systems and processes to help develop best practices for the NDA.
  - Develop working relationships with the existing site management.
  - Help develop Lifecycle Baselines and Key Performance Indicators (KPIs)
  - Help develop methods to monitor site performance against future contracts with the NDA.
- 2) National Lifecycles Baselines: Each site will develop a site Lifecycle Baseline, covering the scope, schedule and cost to carry out the decommissioning plans.
  - These site specific baselines will be aggregated to form the National Lifecycle Baseline.
  - They will link in to all national requirements, such as funding, the supply chain, legislation, research and development activities and resource availability.
  - The intention is that each site will update its baseline annually until all its liabilities have been discharged.

Near Term Work Plan: This is similar to the Lifecycle Baseline except that it focuses on the next three to five years.

Key Performance Indicators: These will be developed annually based on the Near Term Work Plan and will be used to monitor performance. KPIs may include such things as numbers of waste packages produced, attainment of key milestones ahead of schedule, reductions in dose, enhancements in safety, reduced costs and so on.

Data collected during the Site Assessments is being used to provide a reference point for the future. In particular the LMU has established a 'Catalogue of Nuclear Liabilities' which provides in one place basic information about the 500 or so liabilities for which the NDA will be responsible. It is also setting up a Key Technical Issues Register to ensure that these are resolved in a timely and cost effective manner.

### **Establishing common methodologies**

In the past each management team, and often each site, has developed its own tools and methodologies for reporting, estimating and planning activities associated with liabilities management.

The establishment of a single body to oversee public sector civil nuclear liabilities provides a unique opportunity to establish common standards for such things and to this end the LMU has begun to draft a “Requirements” document. Over and above the points dealt with in the previous section this will cover such things as:

- Charging practice
- Change control
- Budget submission & authorisation
- Trending
- Funds tracking
- Estimating
- Contingency & management reserve
- Schedule hierarchy & use
- Performance monitoring
- Site and programme reporting
- Site and programme reviews
- Communication Developing the contracting strategy

The White Paper emphasises the Government’s intent to improve value for the taxpayer in the decommissioning of civil nuclear sites. The Government has elected to do this by introducing competition into the contract award process. This will increase innovation and allow international experience, new technology and best practice to be introduced to the industry. The LMU has begun the preparatory work to enable the NDA to award bid contracts competitively soon after its creation. This involves consultation with the Regulators and other key parties such as the Trade Unions about contract structures, to ensure that site knowledge is retained whilst providing an ability to change contractor if required. The probable contract structure is one in which the NDA retains ownership of the sites whilst the licensees operate them under contract for a fixed but renewable period. The management contractors will be incentivised to achieve prescribed targets of efficiency against a fixed requirement for safety. The contract remuneration scheme will generally provide for the contractor to recover his costs, but his profit will depend on performance. Performance will be judged against the Key Performance Indicators and will cover all aspects of the contractor’s activities. The direct link between performance and profit allows the contractor and his staff to focus on those areas that meet the NDA’s requirements.

The LMU plans to encourage contractors to join the decommissioning industry to increase the bid pool for contracts. To achieve this the LMU is planning to publicise the Government’s new strategy both in the UK and internationally, establish pre-qualification criteria for contractors and publish a communications package which will include a *pro forma* contract. Furthermore, in April 2003 it will host an event to inform the supply chain of the activities it is proposing to promote competition and explain its approach to contracting.

### **Establishing close working arrangements with the nuclear regulators**

Regulation will remain an integral part of the liability discharge process, and the NDA will maintain a close working relationship with the regulators, so that it can fulfil its oversight role. Amongst other things the LMU is seeking to involve the regulators in the development of the national and site specific baseline programmes and strategies. The LMU has also begun the task of developing a comprehensive understanding of the strategic regulatory issues that could affect a site management team's ability to deliver its programme. From this it will be looking for potential synergies that might deliver cost savings or other benefits, by integration of clean up programmes and better allocation of national resources. A prioritisation methodology is being developed for this purpose, and the regulators will be invited to participate in this.

### **Timetable for formation of the Nuclear Decommissioning Authority**

The formation of the NDA is dependent on primary legislation. The Government intends to publish a draft bill in Spring 2003 and to bring forward the necessary legislation as soon as the parliamentary timetable allows. According to current plans the NDA will become fully operational from 1<sup>st</sup> April 2005. The sequence of activities leading to the fully operational NDA is:

- Design a model NDA.
- Build the organisation and systems.
- Complete asset transfers and implement new contractual arrangements.

These tasks will be completed in parallel with the mobilisation of the NDA in terms of staff and facilities. Key dates are as follows:

- May 2003: Draft Bill & Charter published.
- December 2003: Bill receives its second reading; shadow NDA begins to be formed, staffing up progressively over ensuing 18 months or so.
- September 2004: NDA formally established; staffing *etc* continues.
- April 2005: NDA becomes fully operational.